

Application Serial No. 10/627,105  
In reply to Office Action of 12 July 2007

Attorney Docket No 79865

REMARKS / ARGUMENTS

Claims 1-14 are currently pending in the application.  
No claims have been allowed. Claims 1-14 are rejected to.  
Claims 3, 4 and 6 are canceled without prejudice or disclaimer.  
Claims 1 and 9 are amended by this response.

These rejections and objections are respectfully traversed  
in view of this amendment and the remarks that follow.

In the Office Action, claims 1 and 3 of the present  
application were rejected under 35 U.S.C. § 102(b) as being  
anticipated by Holmberg (U.S. Patent No. 5,212,755). In  
response, claim 3 has been canceled without prejudice or  
disclaimer; therefore, the rejection of the Office Action is  
resolved for the claim. In regard to claim 1, the claim has  
been amended to partially recite that each of the strength  
members of the inner and outer layers is a plurality of steel  
wires encased in a plastic tube. Furthermore, the claim recites  
at least one tube containing at least one optical fiber  
incorporated into the outer layer wherein a diameter of the at  
least one tube is smaller than a diameter of each strength  
member of the outer layer and a polymer coating encasing each  
the at least one tube such that the diameter of the tube  
approximates the diameter of each strength member of the outer  
layer.

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In contrast, the Holmberg reference utilizes KEVLAR armor wires 26 as strength members (See Col. 2, lines 64-65). The cited reference neither teaches nor suggests a plurality of steel wires encased in a plastic tube, as recited by amended claim 1 of the present application.

Furthermore, the Holmberg reference recites armor wires 28 containing fiber optics preferably constructed by applying a hard reinforced matrix cylindrical shell over a jacketed fiber optic cable, the reinforcement preferably being of the same material as the armor wires (Col. 3, lines 8-12). While the armor wires 18 have a smaller diameter than their accompanying strength members 16 in the inner layer scenario (See FIG. 1 and Col. 2, Lines 39-40), an armor wire 28 containing a fiber-optic in multi-layer arrangement where the strength members are adjacent to the armor wire 28 utilizes the same diameter for the armor wire and the adjacent strength member (See FIG. 2). The cited reference neither teaches nor suggests at least one tube containing at least one optical fiber incorporated into the outer layer wherein a diameter of the at least one tube is smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each said at least one tube such that the diameter of the tube approximates the diameter of each strength member of the outer layer as recited by amended claim of the present application. As a result of the

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substantial differences between the strength members and the armor wire of the Holmberg reference to the strength members and tube of amended claim 1 of the present application; the cited reference does not anticipate the claim. As such, the rejection of the Office Action is resolved.

In the Office Action, claims 2 and 4 of the present application were rejected under 35 U.S.C. § 103(a) as being unpatentable over Holmberg (U.S. Patent No. 5,212,755) in view of Marlier (U.S. Patent No. 5,125,062). In response, claim 4 has been canceled without prejudice or disclaimer; therefore, the rejection of the Office Action is resolved for the claim.

In regard to claim 1, upon which claim 2 depends, the claim has been amended to partially recite that each of the strength members of the inner and outer layers is a plurality of steel wires encased in a plastic tube. Furthermore, the claim recites at least one tube containing at least one optical fiber incorporated into the outer layer with a diameter smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each tube such that the diameter of approximates the diameter of each strength member.

In contrast, the Holmberg reference utilizes armor wires as strength members. The cited reference neither teaches nor suggests a plurality of steel wires encased in a plastic tube, as recited by amended claim 1 of the present application.

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Furthermore, the Holmberg reference recites armor wires with the wires having a smaller diameter than their accompanying strength members in the inner layer scenario, an armor wire 28 containing a fiber-optic where the strength members are adjacent to the armor wire 28 utilizes the same diameter for the armor wire and the adjacent strength member. Therefore, the cited reference also neither teaches nor suggests at least one tube containing at least one optical fiber incorporated into the outer layer wherein a diameter of said at least one tube is smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each such that the diameter of the tube approximates the diameter of each strength member of the outer layer. As a result of the substantial differences of the strength members and the armor wire of the Holmberg reference; the strength members and tube of amended claim 1 of the present application would not be obvious to one ordinarily skilled in the art especially in regard to combining the Holmberg and Marlier references. As such, the rejection of the Office Action is resolved for claim 2, which depends on claim 1.

In the Office Action, claim 5 of the present application was rejected under 35 U.S.C. § 103(a) as being unpatentable over Holmberg (U.S. Patent No. 5,212,755) in view of Ruffa (U.S. Patent No. 5,734,623). In response, claim 1, upon which claim 5 depends, has been amended to partially recite that each of the

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strength members of the inner and outer layers is a plurality of steel wires encased in a plastic tube. Furthermore, the claim recites at least one tube containing at least one optical fiber incorporated into the outer layer with a diameter smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each tube such that the diameter of approximates the diameter of each strength member.

In contrast, the Holmberg reference utilizes armor wires as strength members. The cited reference neither teaches nor suggests a plurality of steel wires encased in a plastic tube, as recited by amended claim 1 of the present application. Furthermore, the Holmberg reference recites armor wires with the wires having a smaller diameter than their accompanying strength members in the inner layer scenario, an armor wire 28 containing a fiber-optic where the strength members are adjacent to the armor wire 28 utilizes the same diameter for the armor wire and the adjacent strength member. Therefore, the cited reference also neither teaches nor suggests at least one tube containing at least one optical fiber incorporated into the outer layer wherein a diameter of said at least one tube is smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each such that the diameter of the tube approximates the diameter of each strength member of the outer layer. As a result of the substantial differences of the

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strength members and the armor wire of the Holmberg reference; the strength members and tube of amended claim 1 of the present application would not be obvious to one ordinarily skilled in the art especially in regard to combining the Holmberg and Ruffa references. As such, the rejection of the Office Action is resolved for claim 5, which depends on claim 1.

In the Office Action, claims 6-8 of the present application were rejected under 35 U.S.C. § 103(a) as being unpatentable over Holmberg (U.S. Patent No. 5,212,755) in view of Stottlemeyer (U.S. Patent No. 6,591,046). In response, claim 6 has been canceled with prejudice or disclaimer; therefore, the rejection of the Office Action is resolved for the claim.

In regard to the remaining claims, claim 1, upon which claims 7 and 8 depend, has been amended to partially recite that each of the strength members of the inner and outer layers is a plurality of steel wires encased in a plastic tube. Furthermore, the claim recites at least one tube containing at least one optical fiber incorporated into the outer layer with a diameter smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each tube such that the diameter of approximates the diameter of each strength member.

In contrast, the Holmberg reference utilizes armor wires as strength members. The cited reference neither teaches nor

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suggests a plurality of steel wires encased in a plastic tube, as recited by amended claim 1 of the present application. Furthermore, the Holmberg reference recites armor wires with the wires having a smaller diameter than their accompanying strength members in the inner layer scenario, an armor wire 28 containing a fiber-optic where the strength members are adjacent to the armor wire 28 utilizes the same diameter for the armor wire and the adjacent strength member. Therefore, the cited reference also neither teaches nor suggests at least one tube containing at least one optical fiber incorporated into the outer layer wherein a diameter of said at least one tube is smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each such that the diameter of the tube approximates the diameter of each strength member of the outer layer. As a result of the substantial differences of the strength members and the armor wire of the Holmberg reference; the strength members and tube of amended claim 1 of the present application would not be obvious to one ordinarily skilled in the art especially in regard to combining the Holmberg and Stottlemeyer references. As such, the rejection of the Office Action is resolved for claims 7 and 8, which depend on claim 1.

In the Office Action, claims 9-14 of the present application were rejected under 35 U.S.C. § 103(a) as being unpatentable by Ruffa (U.S. Patent No. 5,734,623) in view of

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Holmberg (U.S. Patent No. 5,212,755). In response, claim 9, upon which claims 10-14 depend, has been amended to partially recite that each of the strength members of the inner and outer layers is a plurality of steel wires encased in a plastic tube. Furthermore, the claim recites at least one tube containing at least one optical fiber incorporated into the outer layer with a diameter smaller than a diameter of each strength member of the outer layer and a polymer coating encasing each tube such that the diameter of approximates the diameter of each strength member.

In contrast, the Holmberg reference utilizes armor wires as strength members. The cited reference neither teaches nor suggests a plurality of steel wires encased in a plastic tube, as recited by amended claim 9 of the present application. Furthermore, the Holmberg reference recites armor wires with the wires having a smaller diameter than their accompanying strength members in the inner layer scenario, an armor wire 28 containing a fiber-optic where the strength members are adjacent to the armor wire 28 utilizes the same diameter for the armor wire and the adjacent strength member. Therefore, the cited reference also neither teaches nor suggests at least one tube containing at least one optical fiber incorporated into the outer layer wherein a diameter of said at least one tube is smaller than a diameter of each strength member of the outer layer and a



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polymer coating encasing each such that the diameter of the tube approximates the diameter of each strength member of the outer layer. As a result of the substantial differences of the strength members and the armor wire of the Holmberg reference; the strength members and tube of amended claim 9 of the present application would not be obvious to one ordinarily skilled in the art especially in regard to combining the Holmberg and Stottlemeyer references. As such, the rejection of the Office Action is resolved for claims 10-14, which depend on claim 9.

In view of the Remarks above, the Applicants respectfully request reconsideration and allowance of the application.

The Examiner is invited to telephone Michael P. Stanley, Attorney for Applicant, at 401-832-6393 if, in the opinion of the Examiner, such a telephone call would serve to expedite the prosecution of the subject patent application.

Respectfully submitted,  
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11 October 2007

By



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